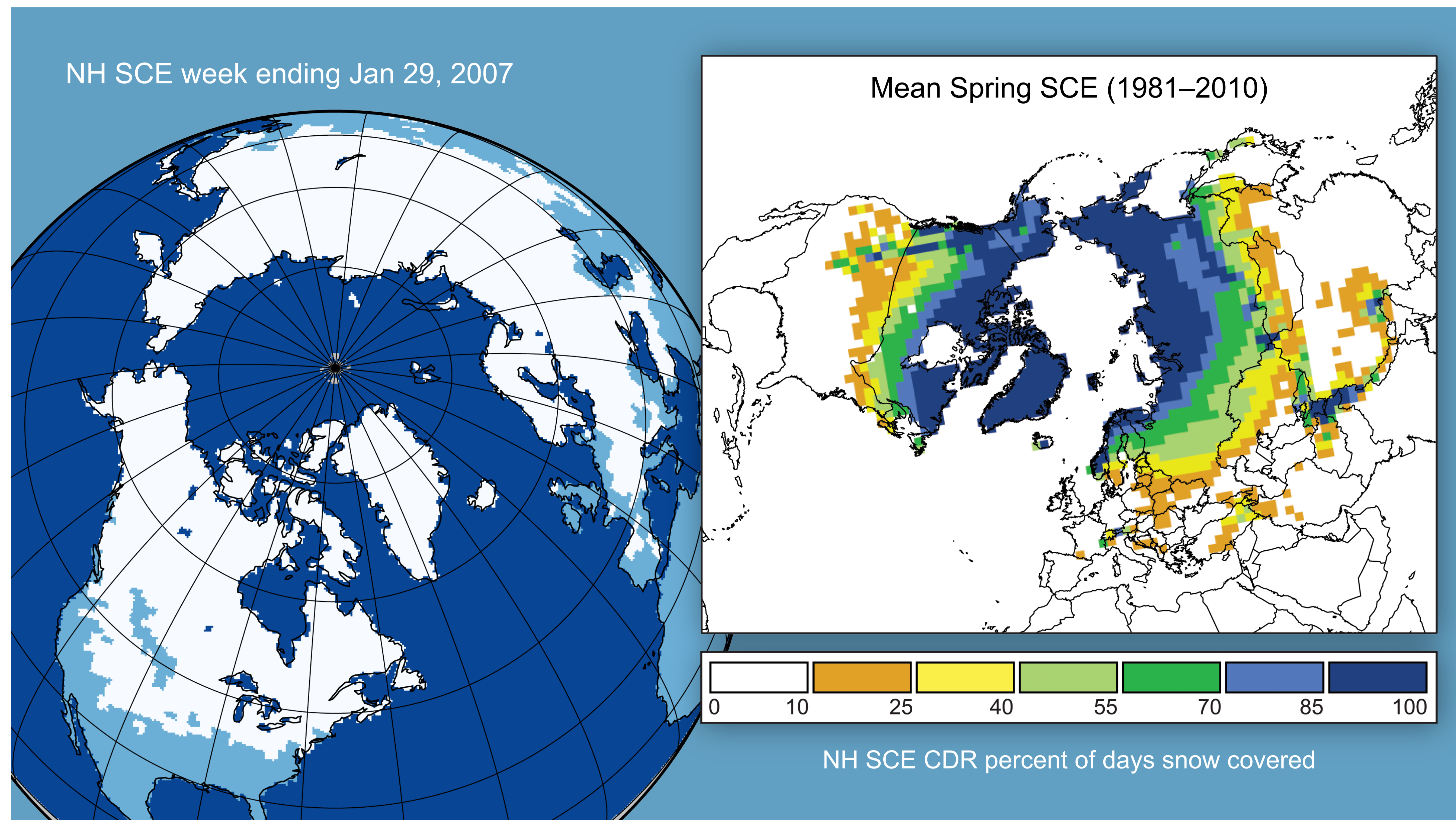


Northern Hemisphere (NH) Snow Cover Extent (SCE) CDR and Applications

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CDR visualization



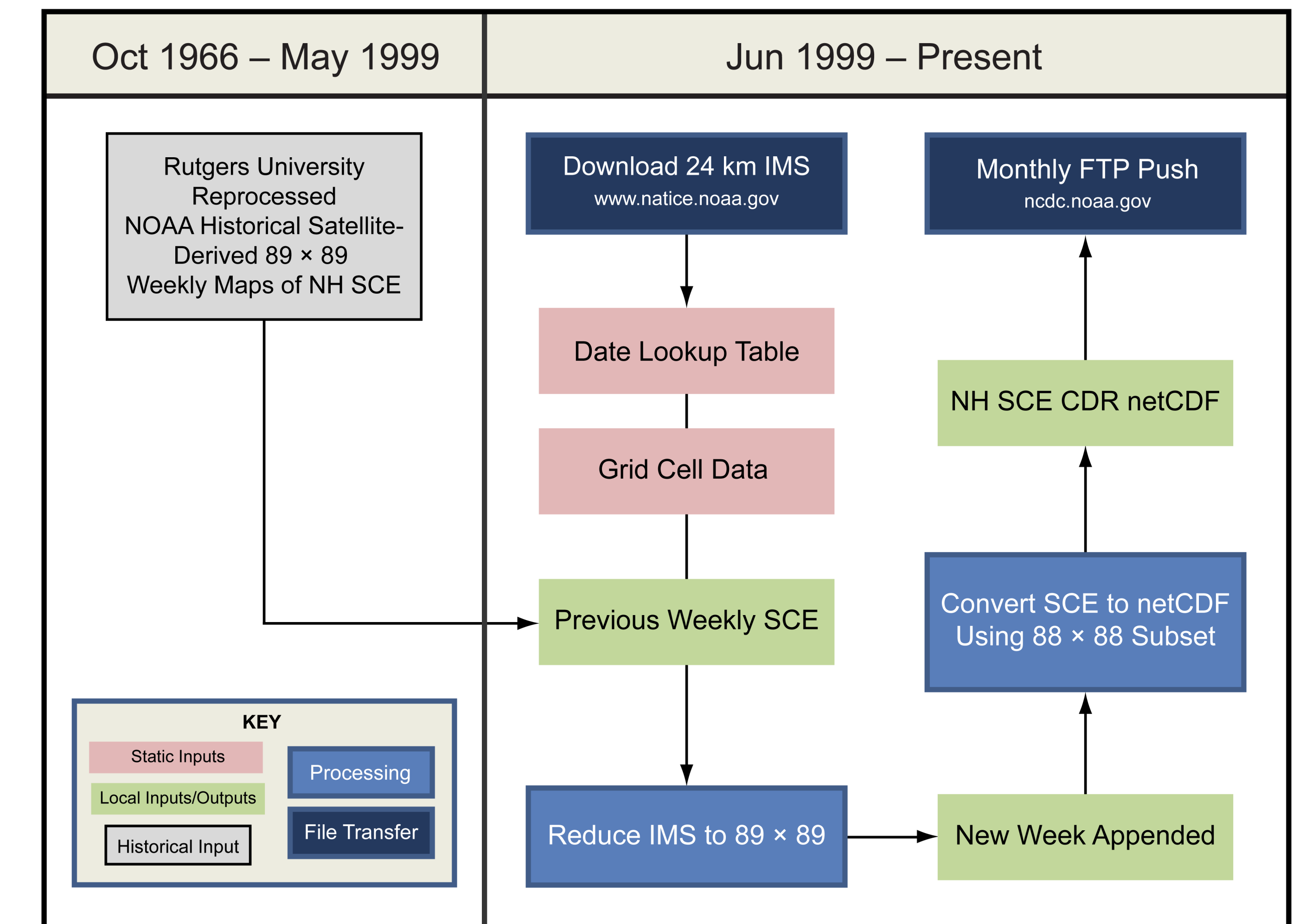
CDR description

Specifications

- Binary (snow / no snow) over NH land surface
- 88 × 88 Cartesian grid on polar stereographic projection
- 190.6 km resolution at 60°N
- Weekly temporal resolution
- October 4, 1966–present

Inputs to CDR

- Oct 1966–May 1999: primarily visible satellite imagery from multiple instruments
- After May 1999: Interactive Multisensor Snow and Ice Mapping System (IMS)
- SCE derived from multiple sources by trained analysts



NH SCE CDR simplified processing flow diagram

Current uses and applications based on the CDR

Monitoring and Assessment

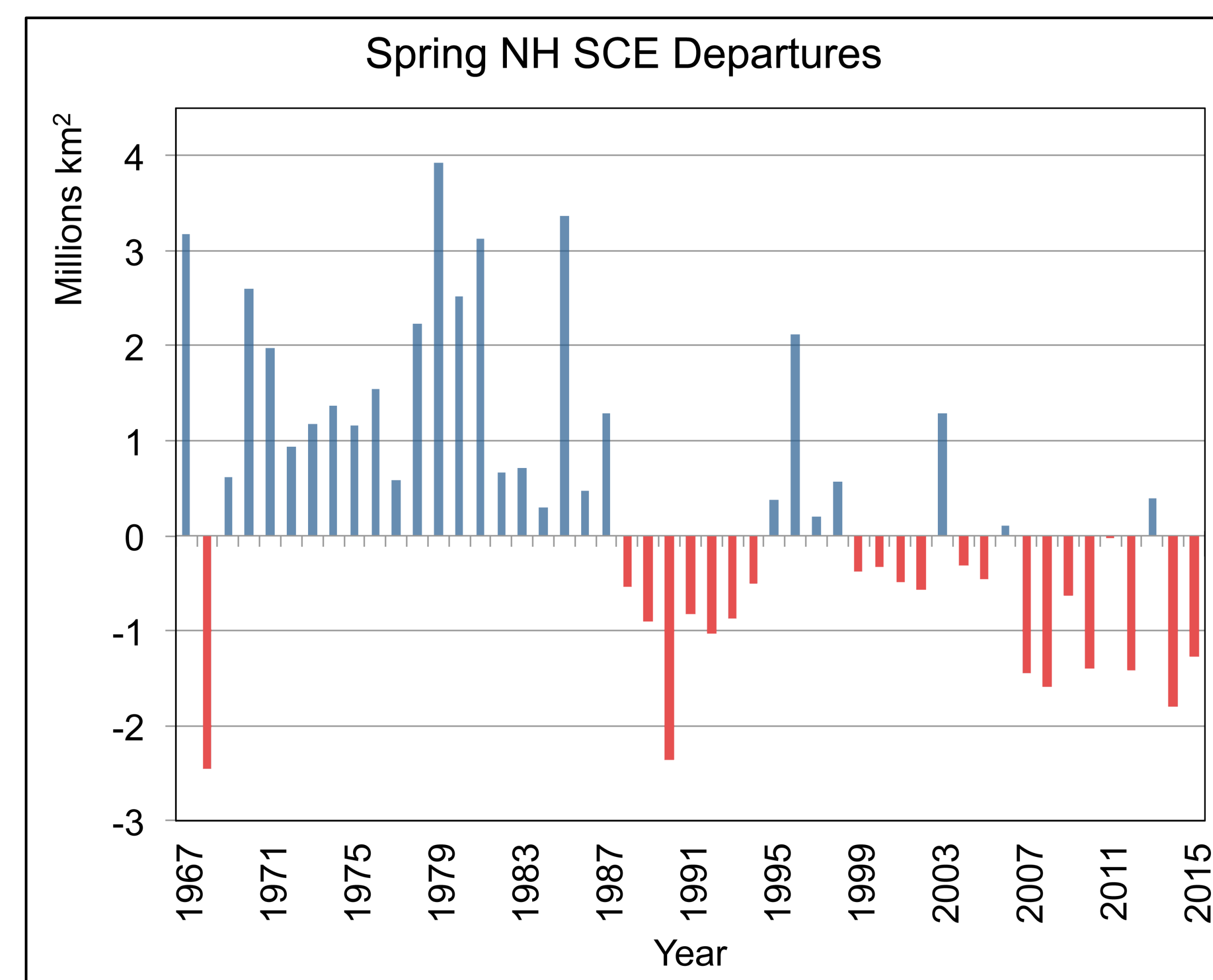
- U.S. Global Change Research Program (GCRP), *2014 National Climate Assessment*
- Bulletin of the American Meteorological Society (BAMS), *State of the Climate in 2014*
- U.S. Environmental Protection Agency (EPA), *Climate Change Indicators in the United States*

Applied Research

- Numerous peer reviewed publications
- Ongoing project: *Snow ablation characteristics and melt–discharge relationships in the Columbia River Basin*

Media and Outreach

- NOAA Global Climate Dashboard
- National Snow and Ice Data Center (NSIDC) *Satellite Observations of Arctic Change*
- NSIDC Arctic Sea Ice News & Analysis
- News media stories



Future improvements and anticipated applications

50 years of NH SCE satellite monitoring

- Mark the 50th anniversary of the longest satellite-based record of any environmental variable
- Highlights of plans include redesigned website
- Improved production system for weekly updates
- Change Request (CR) pending to further refine netCDF and bring NH SCE CDR to v01r02
- Ongoing research efforts in house and in cooperation with others for a variety of climatological, hydrological & other purposes

17 years of operational IMS output

- Operational since November 1998
- 24 km resolution at 60°N
- Daily temporal resolution
- Bring IMS SCE output up to CDR standards

